

SEACREST UPPER SCHOOL COURSE OF STUDY

ENGLISH DEPARTMENT COURSES

NINTH GRADE

World Mythology Honors

Full Year

Students begin their study of literature in high school by acquiring a firm foundation in the world of the epic hero. *The Odyssey*, *The Aeneid*, *Macbeth*, and *The Ramayana* are all studied with depth and intensity. Students also read modern plays (*The Glass Menagerie*), novels (*My Antonia*, *The House on Mango Street*), and poetry. The reading and discussion of World Mythology introduces students to the stories of many of the world's civilizations, both Eastern and Western. Through close reading and directed discussion students gain exposure to ideas and concerns that link all cultures. The course includes vocabulary work and the study of words identified as key to the vocabulary of college-bound students. The fourth quarter centers on writing. The curriculum emphasizes a variety of forms, but focuses mainly on the development of the formal critical essay. Grammar and usage work develops from the evaluation of students' own writing.

TENTH GRADE

World Literature Honors

Full Year

World Literature builds upon the foundations established in World Mythology. The course emphasizes the study and consideration of the literary, cultural, and human impact of a variety of great works found in the Western and non-Western literary traditions. The curriculum includes works from 400 B.C.E. to the present. Following upon the World Mythology focus on the human quest, a primary thematic query addressed by this course is the human drive for control and power. Emphasis is placed on the enduring human values that unite the different literary traditions. Readings (in both the original and translation) include novels, shorts stories, plays, and poetry. Texts include: *Frankenstein*, *Hamlet*, *Paradise Lost*, *Dante's Inferno*, *The Bible as/in Literature*, and selected poetry. The study of vocabulary continues to be important, and students receive practice in the verbal portions of the Scholastic Achievement Test. Formal rhetorical structures are introduced to help students write with greater critical depth and eloquence.

ELEVENTH GRADE

AP and Honors American Literature

Full Year

American Literature, in all its diverse forms and fixations, can be seen as centering on several overriding themes: the conflict between solitude and society, the need for citizens to both rebel and conform, the calming presence of the natural world judged against the feverish specter of commerce, the authority of organized religion in opposition to Whitman's observation that "...nothing, not God, is greater to one than one's self is." This course focuses on such tensions and endeavors to answer the essential questions: What is the American dream? What does it mean to be American? What role does religion play in American life? In order to shape answers, students read a variety of vital and influential American works. Writers studied include Twain, Hawthorne, Emerson, Thoreau, Melville, Whitman, Dickinson, Hurston, Fitzgerald, and Morrison. An important goal of the course is to promote an understanding of the many forms American citizenry and the American experience can take. Vocabulary and SAT practice are an essential part of the course. Well-prepared individuals may opt to sit for the AP Literature exam

in May after receiving additional instruction in test-taking skills and strategies from the instructor.

TWELFTH GRADE

Introduction to College Composition Honors (Required)

Fall

This course focuses on the writing of the expository essay. Students will spend the semester working on the expression of their ideas in the various forms the essay can take: narrative, descriptive, process, cause and effect, comparison and contrast, classification and division, definition, and argumentation. Great essayists will be studied (Orwell, Emerson, E.B. White, and Martin Luther King, Jr., for example). Class will run in a workshop setting. Students will share their writing and offer constructive commentary on the work of their classmates.

TWELFTH GRADE SPRING ELECTIVES, 2012

Literary Loves

Spring

In this exploration of one of the perennial themes of art, we will encounter some of the greatest love stories in the canon of classic literature. We will watch...as Madame Bovary struggles with the love she is supposed to feel for her simple husband, a provincial doctor...as the “whisky priest” hides from the revolutionary Mexican government and strives to continue loving all those he encounters in Greene’s *The Power and the Glory*... and as a young governess, Jane Eyre, responds when confronted with the love of the owner of the estate where she is employed. Several short stories and a variety of love poetry will also be examined as we consider the immense variety and passion with which our finest authors have approached what might be the most fundamental of human emotions.

The Literature of War

Spring

“They carried all they could bear, and then some, including a silent awe for the terrible power of the things they carried.”

— Tim O’Brien, *The Things They Carried*

“War is what happens when language fails.”

— Margaret Atwood

In this course we will read of multiple wars, heroes, villains, and victims as writers struggle to make meaning of what is described by some as the most meaningless violence in which humans engage. We will consider the themes in war that seem to transcend time and culture.

Concentrated time will be spent analyzing the uses of language and time in war literature. Texts may include: *The Iliad*, *All Quiet on the Western Front*, *The Red Badge of Courage*, *For Whom the Bell Tolls*, *Slaughterhouse-Five*, and *The Things They Carried*.

Gothic Literature

Spring

The features (or clichés) of Gothic literature include haunted castles, graveyards, ruins, enclosed spaces, ghosts, vampires, doppelgangers, corpses, and skeletons. This is the literature of the dark side and explorations of the battles between good and evil. At the core of all this exploring is the opportunity for students to understand moral development and how outside influences alter or shape one’s moral compass.

UPPER SCHOOL ENGLISH ELECTIVES

Reading and Writing Workshop

Full Year

Students may enroll in this course for supplementary focus on the development of reading and writing skills. Students set individual goals with the instructor and work toward greater mastery and articulation throughout the year. Areas of focus may include: reading comprehension, critical reading, writing fluency, grammar and punctuation, and vocabulary development. Grade Levels: 9-12

HEALTH AND PHYSICAL EDUCATION DEPARTMENT COURSES

Health and Physical Education

Full Year

This course intersperses Health (Life Management) and Physical Education. The Physical Education portion provides a basic foundation for a wellness lifestyle. Emphasis is placed on the importance of physical fitness that leads to an active, healthy lifestyle. Students participate in team sports that involve cooperation, sportsmanship, and the development of athletic skill. The course also includes individual activities that promote self-confidence, self-expression, and positive self-image. The course design includes an assessment of a student's physical fitness level, including the development of a personal fitness profile and a fitness program to meet personal needs and goals.

The Health portion of this course provides information on maintaining a balanced life and body. Emphasis is on learning and practicing proactive health management. Healthy and proactive lifestyle techniques are taught, implemented, and evaluated by each student to discover which techniques are most individually effective. Exercise and nutrition, healthy social habits, quality relationships, stress management, and the knowledge of programs available to manage a quality life are discussed, practiced, journalized, and evaluated for effectiveness.

Weight Training

Semester

This course is an introduction to weight training and team sports. Students acquire basic knowledge and skills in weight lifting, improved muscular strength and endurance, and begin to enhance self-image.

Strength and Flexibility Training (Yoga & Pilates)

Semester

The purpose of this course is to introduce the principles of yoga and Pilates. This class will focus on poses, strength exercises, balance development, and flexibility. Our goal is to incorporate these practices into a daily wellness program that increases energy, relieves stress, and improves posture and flexibility.

Team Sports: Invasion Games and Net Games

Semester

This course is a semester-long elective offered to sophomores, juniors, and seniors. Students develop cardiovascular endurance and work on expanding offensive and defensive team strategies while committing to a wellness lifestyle. Games with similar tactics will be the focus. The goal of the course is for students to gain a deeper understanding of the games and to transfer this understanding more effectively from performance in one game to another. The invasion game class will include basketball, team handball, soccer, hockey, and ultimate Frisbee. The net games will offer badminton, pickle ball, tennis, and volleyball.

HISTORY/SOCIAL SCIENCE DEPARTMENT COURSES

NINTH GRADE

Regional Roundtable

Full Year

This is primarily a research course designed to allow students to investigate the rich histories of various regions around the world. Students are required to finish a lengthy research paper by semester's end, followed by an oral defense of their thesis before a panel of history teachers.

TENTH GRADE

World History Survey

Full Year

World History is a survey course that will investigate relationships between peoples of the world. Regional histories to be studied in this course include East Asia, South Asia, the Middle East, Africa, Europe, North America, and Latin America.

ELEVENTH GRADE

U.S. History

Full Year

This is a two-semester survey course in American History. Students will be expected to analyze, interpret, investigate, and articulate themes in American History. Oral examinations will be a primary tool for assessment. A major research paper (and the oral defense of this paper) is required of all students.

AP U.S. History

Full Year

This is a fast moving, two-semester survey course in American History. Students will be expected to analyze, interpret, investigate, and articulate themes in American History. All students who choose AP U.S. History will take the AP exam and can expect many hours of note taking and memorization in order to score well on this assessment. Students who choose to take AP U.S. History must have averaged a 90% or higher in their previous four semesters in History. If a student does not meet this pre-requisite, he or she may petition the department chair and write a summer paper. If this paper is of excellent quality a waiver may be offered and the student offered enrollment in the course.

TWELFTH GRADE

United States Government

Fall

This course is one semester long, required for graduation, and offered only to seniors in conjunction with Economics. The goal of the course is to give students a stronger understanding of the function of the United States government and its major participants. Focus includes the historical basis of the government, the three branches of government, political parties, campaigns, and elections

Economics

Spring

This course is one semester long, required for graduation, and offered only to seniors in conjunction with United States Government. The goal of this class is to give students a solid understanding of the economy and how it affects their lives. The course focuses on microeconomics, macroeconomics, banking, and personal finance.

HISTORY/SOCIAL SCIENCE ELECTIVES

Introduction to Psychology Honors

Full Year

This course provides an introduction to the study of psychology. Students explore a variety of topics, including psychology's history and methods of scientific inquiry, human development from birth to death, the brain, states of consciousness, intelligence, personality, psychological disorders and therapies, and social psychology. The primary textbook is a college-level introductory book. Classes are based on lecture, discussion of readings, and note taking. This course prepares the student for advanced course offerings in psychology. Prerequisites: None. Grade Levels: 10-12

AP Psychology

Full Year

AP Psychology is a rigorous, college-level course with a curriculum that is predetermined by the College Board. Students must take the AP Psychology exam in May as a requirement for successful completion of the course. This class continues the study of psychology that students commenced in the Intro to Psychology course, and all topics of an introductory college psychology course are presented. The pace of the course is accelerated, reading is extensive, students must be highly motivated to succeed, and must commit to regular group study sessions outside of allotted classroom time. Prerequisites: Successful completion of Introduction to Psychology with a minimum grade of A-. Students must have a minimum grade of B in English/Literature course. The recommendation of the instructor is also required. Grade Levels: 10-12

Big History

Full Year

This course, team-taught by a history teacher and a science teacher, weaves together concepts and themes drawn from chemistry, physics and biology. It does so with a goal of helping students understand a historical narrative and human civilizations past, present and future. Big History covers 13.7B years of shared history, from the Big Bang to modernity. Unlike more narrowly focused courses, Big History seeks out common themes and patterns spanning vast time scales, helping us better understand people, civilizations and the world we live in. At its core big history addresses the issue of sustainability by exploring the ongoing capacity of the Earth to maintain life. Students are encouraged to develop ideas about how to meet the needs of the present without compromising the ability of future generations to meet their own needs. The course requires students to read widely, write frequently, and connect ideas and information across a wide range of media sources. Accordingly, Big History supports the development of a broad range of important skills and helps create the foundation for more advanced study.

American Foreign Policy

Fall

This course is a semester-long elective offered to seniors and juniors (when space allows). The class will focus on the history of the foreign policy of the United States, while considering some of today's foreign policy issues. Additional topics may include foreign policies of other nations, the United Nations, and lessons learned from previous conflicts. Grade Levels: 11, 12

The Art of Persuasion

Spring

Speech class is an elective open to seniors and juniors (when space allows). This course will challenge students to stand before sizable crowds and deliver good speeches. Many of the speeches we practice in class will be persuasive in nature. In addition to the final exam speech

(in front of the student body), students will be graded on four major speeches during the course of the semester. Grade Levels: 11, 12

Introduction to Business and Entrepreneurship

Full Year

In this course we will study the strategies and challenges involved in building and running an enduring, successful business. This course will offer both hands-on experience in managing a business and academic study of essential business practices such as marketing, financial management, strategy, innovation, and human resources. The integration of technology and business will also be a major focus of the course. Grade Levels: 11, 12

THE SEACREST SEMINAR

NINTH GRADE

Community, Responsibility, Respect, and the Individual

Full Year

TENTH GRADE

Do the Right Thing: Moral Reasoning and Rational Decision Making

Full Year

ELEVENTH GRADE

Ethics and the Great Religious Traditions

Full Year

TWELFTH GRADE

College Counseling Workshop

Fall

Agape and the History of Love

Spring

LANGUAGE DEPARTMENT COURSES

Spanish I

Full Year

This is an introductory course for students who have studied no Spanish prior to this year, as well as students who were enrolled in 8th Grade Foreign Language Rotation last year. Prerequisites: None. Grade Levels: 9-12

Spanish II

Full Year

This course continues the basic work of Spanish I and includes vocabulary and grammar study, as well as cultural material. Prerequisites: Successful completion (C or above) of Spanish I. Grade Levels: 9-12

Spanish III Culture/Conversation

Full Year

This course is intended for students who have completed two years of Spanish (non-honors) and want to continue their study of the language. Through reading and conversation, students continue their study of the Hispanic world with emphasis on its numerous cultures. Vocabulary and speaking are emphasized, and students continue to acquire knowledge of grammar as they read, write, and speak in Spanish. Prerequisites: Completion of Spanish II with a grade no lower than C-, or recommendation of Spanish instructor. Grade Levels: 10-12

Spanish III Honors

Full Year

This course continues the work of Spanish II Honors. It is conducted primarily in Spanish and students learn more advanced grammatical structures along with a significant component of vocabulary and culture information. Prerequisites: Completion of Spanish II HRS or Spanish III Culture/Conversation with grade of B or above and recommendation of former Spanish instructor. Grade Levels: 10-12

Spanish IV Honors

Full Year

This advanced course is conducted in Spanish and continues the study of grammatical structures, verb conjugations, and vocabulary acquisition, with strong emphasis on the history, culture, and literature of the Hispanic world. Prerequisites: Completion of Spanish III Honors with grade of B or above as well as instructor recommendation. Grade Levels: 10-12

Spanish V Honors

Full Year

This advanced course is conducted in Spanish and continues the study of grammatical structures, verb conjugations, and vocabulary acquisition, with strong emphasis on the history, culture, and literature of the Hispanic world. Prerequisites: Completion of Spanish IV Honors with grade of B or above as well as instructor recommendation. Grade Levels: 11, 12

French I

Full Year

This is an introductory course for students who have studied no French prior to this year as well as students who were enrolled in 8th Grade Foreign Language Rotation last year. Prerequisites: None. Grade Levels: 9-12

French II

Full Year

This course continues the basic work of French I and includes vocabulary and grammar study as well as cultural material. Prerequisites: Successful completion (C or above) of French I. Grade Levels: 9-12

Latin I

Full Year

This is an introductory course for students who have studied no Latin prior to this year as well as students who were enrolled in 8th Grade Foreign Language Rotation last year. Prerequisites: None. Grade Levels: 9-12

Latin II

Full Year

This course continues the basic work of Latin I and includes vocabulary and grammar study based on the Cambridge Latin textbook series. Prerequisites: Successful completion (C or above) of Latin I. Grade Levels: 10-12

Latin III Honors

Full Year

This course continues the work of Latin II. Students learn more advanced grammatical structures along with vocabulary and verb declensions based on readings from the Cambridge Latin textbook series. Prerequisites: Completion of Latin II with grade of B or above and recommendation of Latin instructor. Grade Levels: 11, 12

Latin IV Honors

Full Year

This advanced course continues to build knowledge of Latin through translations of Virgil's *Aeneid*. Students learn advanced grammatical structures, verb declensions, and vocabulary. Prerequisites: Completion of Latin III Honors with grade of B or above and recommendation of Latin instructor. Grade Levels: 11, 12

MATHEMATICS DEPARTMENT COURSES

HONORS MATHEMATICS

Students taking Honors Mathematics at Seacrest begin their sequence of study by taking Algebra 1 Honors in eighth grade or during freshman year of high school. As students progress through the Mathematics curriculum, they are exposed to introductory and review topics from previous courses. This emphasizes the relationships among basic concepts and higher order processing, and offers the opportunity for continued discovery and in-depth analysis. Students are required to participate in class discussions as a way of emphasizing the importance of proper Mathematical vocabulary and of building the skills necessary for maximum comprehension and retention of concepts. Each member of the Mathematics department implements technology as an integral part of the curriculum. By helping students learn the important role technology plays in today's world of Mathematics, as well as how to use it, students begin to visualize first hand how manipulating equations and diagrams can impact tangible situations and outcomes.

Sequence of Honors Mathematics Courses

- Algebra 1 Honors (This course is the first math course taken in high school unless credit has been otherwise earned in middle school for Algebra 1 Honors.)
- Geometry Honors
- Algebra 2 Honors
- Pre-Calculus Honors
- Calculus Honors or AP Calculus AB (Review of transcripts and recommendation by the Mathematics Department are required to enroll in AP Calculus AB)

ADVANCED MATHEMATICS

Students enrolled in Advanced Mathematics begin their sequence in eighth grade Algebra 1 Advanced. Students who meet rigorous requirements and who enjoy the challenge of applying knowledge to new and unique situations find the advanced program of study to be invigorating, inspiring, and fun. Students experience an accelerated pace, in-depth discussions, and an infinite number of problems to challenge even the most gifted math student. Each member of the Mathematics department implements technology as an integral part of the curriculum. By helping students learn the important role technology plays in today's world of Mathematics, as well as how to use it, students begin to visualize first hand how manipulating equations and diagrams can impact tangible situations and outcomes. Students in Advanced Mathematics are committed members of Mu Alpha Theta, a national mathematics honors society, and participation at Regional competitions as an additional requirement.

Sequence for Advanced Mathematics Courses

- Grade 8: Algebra 1 Advanced
- Grade 9: Geometry Advanced
- Grade 10: Algebra 2 Advanced
- Grade 11: Pre-Calculus Advanced
- Grade 12: AP Calculus BC
- AP Statistics (Recommended to be taken concurrently with Pre-Calculus Advanced)

Students new to Seacrest can petition for admittance into the Advanced Program in Mathematics. They should submit two letters of recommendation, (one from the most recent math teacher), and earn an A or B on an Advanced level exam given at Seacrest. A meeting with the Mathematics Department Chair to review transcripts is also part of the process.

SCIENCE DEPARTMENT COURSES

NINTH GRADE

Honors Chemistry: A Forensic Science Perspective

Full Year

This course will focus on the gathering, expression, and analysis of data in a chemistry lab. Our work overall will take place within a framework of discussion and study of key ideas in chemistry. We will begin with an examination of ideas in physical chemistry that include theories of atomic structure, bonding, physical and chemical properties of matter, the behavior of gases, a study of acids and bases, chemical reactivity, and rates of reaction. We will consider the behavior of groups of elements on the periodic table and make predictions based on patterns revealed by the electron configurations of atoms. Emphasis in the lab will be on effective chemical hygiene and developing a sound critical perspective on data. Students will be required to identify patterns emerging in data sets constructed by the class as a whole and to continually articulate the linkages between our classroom study of chemistry and our work in the chemistry lab. Similarly, students will link their study of chemistry to science-related current events. Students will also be required to consider the validity of scientific arguments behind ethical debates in a thoughtful and informed manner. **Students who would like to earn Honors credit will sign a contract agreeing to take on work at a much higher level.**

TENTH GRADE

Honors Biology

Full Year

Biology is “the science that seeks to understand the living world.” Life can be studied at many different levels, from the molecular or cellular level to that of an organism, from populations and communities of organisms to the biosphere itself. It is essential for students to understand the living world around them so that they may become educated consumers, voters, and stewards of the world in which they live. This introductory course covers the chemistry of living organisms, cell structure and function, genetics, systems of the human body, modern evolutionary classifications, and taxonomy. The majority of the course involves learning to appreciate the tremendous variety of life found in our world, the characteristics shared by living things, and the complexity of the living world. Students learn best through exploration and discovery; therefore, students will also perform experiments designed to enhance their curiosity about the living world around them and to better their understanding of the scientific principles learned in class.

Students who would like to earn Honors credit will sign a contract agreeing to take on work at a much higher level.

AP Chemistry: Inorganic Chemistry

Full Year

Sophomores may enroll in this course with the permission of the instructor. The course must be taken concurrently with Biology.

ELEVENTH & TWELFTH GRADE ELECTIVES

AP Chemistry: Inorganic Chemistry

Full Year

This course is the equivalent of a general chemistry course usually taken during the first college year. Students attain a depth of understanding of the fundamentals and a competence in dealing with chemical problems. The course contributes to the development of a student’s ability to think, write, and speak clearly and logically. Advanced Chemistry uses a comprehensive college-level textbook, and emphasis is placed on chemical calculations and the mathematical

formulation of principles. College-level laboratory work is done. Students are expected to master the topics treated, spend required time on the course content and assignments, and successfully conduct the variety of experiments done in the laboratory. All students must sit for the AP Chemistry exam. Prerequisites: An A in Chemistry and enrollment in Algebra II Advanced or higher.

AP Biology

Full Year

Advanced Placement Biology is designed to be the equivalent of a two semester college level general biology course. The class is conducted at the college level and students are expected to work accordingly. AP Biology differs significantly from a traditional high school biology course in terms of its rapid pace, course content, depth of coverage, and the extensive time and effort required to achieve mastery of the subject area. The course is designed to be taken only after the successful completion of a first course in high school biology. The curriculum centers on three general areas of study: molecules and cells, heredity and evolution, and organisms and populations. In addition, it is helpful to think in terms of the major themes: science methodologies and applications to society; energy transfer, continuity and change; and relationships between structure and function, and regulation and interdependence in nature. In general, the course will be presented as a combination of lectures, short videos, activities, labs, and group discussions.

Physics: Our World in Action

Full Year

Rockets, projectile launchers, electric motors, boats, and mousetrap cars draw the learner into the conceptual world of physics. This course deepens and enhances the way one sees the physical world. The conceptual approach to physics relies on analogies and imagery from real-world situations to build a strong conceptual understanding of physical principles. Students in this course engage in the exploration of the everyday world and why it works as it does. Topics range from classical mechanics to modern physics, including the basic laws of motion and gravity, projectile motion, electricity and magnetism, flotation and buoyancy, and the surface of the sun. Students build a strong conceptual understanding of physical principles and learn how their knowledge of algebra enables them to understand the world. With this strong conceptual foundation, students are equipped to understand the equations and formulas of physics, and to make connections between the concepts of physics and their everyday world.

Advanced Physics:

An Exploration of Motion and Energy in the Universe

Full Year

Physics extends beyond our world. Understanding of the conceptual and mathematical aspects of physics enables the student to apply what has been learned to new areas of study in physics. Students perform their own research in solar physics. Using their conceptual and mathematical expertise, students are able to lead the class by applying analytical thinking to physics problems and by conducting problem-solving sessions related to their research. Labs and class discussion related to the basic laws of motion and gravity, projectile motion, rotation and angular momentum, momentum and impulse, electricity and magnetism, relativity, and the logical process of analysis using the laws of physics support their learning at the conceptual and mathematical levels. Participants proceed at a fast pace and are proficient in math and analytical thinking. Prerequisite: Students must be enrolled in Precalculus Honors or higher.

AP Physics

Full Year

Anatomy and Physiology

Full Year

Anatomy and Physiology provides exploratory, laboratory, and real-life applications in order to better understand the human body. Topics covered include basic anatomy and physiology; a review of basic chemistry; cells and tissue; skin and body membranes; the body systems and hierarchy; and integumentary, skeletal, and muscular systems.

Forensics

Full Year

This course introduces students to the realms of criminal investigations, forensic science, evidence, and expert testimony. Work will include study of crime scene, courtroom, laboratory, morgue, and other specialized forensic environments and procedures. Guest lecturers and a trip to a forensic laboratory may be included. Students should note that graphic material is covered in this course.

Big History

Full Year

This course, team-taught by a history teacher and a science teacher, weaves together concepts and themes drawn from chemistry, physics and biology. It does so with a goal of helping students understand a historical narrative and human civilizations past, present and future. Big History covers 13.7B years of shared history, from the Big Bang to modernity. Unlike more narrowly focused courses, Big History seeks out common themes and patterns spanning vast time scales, helping us better understand people, civilizations and the world we live in. At its core big history addresses the issue of sustainability by exploring the ongoing capacity of the Earth to maintain life. Students are encouraged to develop ideas about how to meet the needs of the present without compromising the ability of future generations to meet their own needs. The course requires students to read widely, write frequently, and connect ideas and information across a wide range of media sources. Accordingly, Big History supports the development of a broad range of important skills and helps create the foundation for more advanced study.

Robotics Engineering

Full Year

This course is a combination of structural engineering, electric circuits, pneumatics, and computer programming. As a team, students will spend the first semester learning how to design and assemble a robot chassis from basic components. Students will use both power tools and drawing boards to design, machine, and assemble a working robot chassis. Topics reviewed will include stress, load, power, work, mechanical advantage, electric motors, electric circuits, center of mass, pneumatics, drive trains, radio control, and computer programming. In the second semester students will receive the official kit of parts—which includes motors, sensors, transmissions, vision camera, bearings, a radio control system, 12v power supply, and other parts—with which they will build the robot. Students will have six weeks to complete the robot for the State competition in Orlando. Grade Levels: 9-12

Science Department Teams and Clubs

Forensics

Science

Lunar Project

STEM

Robotics

TECHNOLOGY DEPARTMENT COURSES

Graphic Arts and Publications

Full Year

This is a course that addresses the multifaceted needs of the beginning journalism student by introducing him or her to all phases of yearbook production. Students in this course will learn, layout and design, marketing, sales and advertising, photography, and graphic design. Students will also master Adobe Photoshop, In Design, and the art of digital photography and photo enhancement. Classroom activities are closely related to the real world of interviewing, reporting, meeting deadlines, and producing a widely viewed publication. Grade Levels: 9-12

Computer Programming

Full Year

The purpose of this course is to enable students to develop knowledge of programming concepts, in one or more languages, using Microsoft Visual Studio 5.0 compiler. The content of the course will include, but not be limited to: ethical, social, and historical implications of computer science; programming concepts and techniques; sequential and logical problem solving; algorithms and flowcharts; syntax, vocabulary, data types and structures; and writing, testing and debugging computer programs. Prerequisite: Algebra I. Grade Levels: 9-12

Robotics Engineering

Full Year

This course is a combination of structural engineering, electric circuits, pneumatics, and computer programming. As a team, students will spend the first semester learning how to design and assemble a robot chassis from basic components. Students will use both power tools and drawing boards to design, machine, and assemble a working robot chassis. Topics reviewed will include stress, load, power, work, mechanical advantage, electric motors, electric circuits, center of mass, pneumatics, drive trains, radio control, and computer programming. In the second semester students will receive the official kit of parts—which includes motors, sensors, transmissions, vision camera, bearings, a radio control system, 12v power supply, and other parts—with which they will build the robot. Students will have six weeks to complete the robot for the State competition in Orlando. Grade Levels: 9-12

VISUAL AND PERFORMING ARTS DEPARTMENT COURSES

VISUAL ARTS COURSES

Studio Art

Full Year

This course teaches foundational skills for both two-dimensional and three-dimensional art. During the first semester, projects revolve around composition, color, shading, light, and perspective. The project demands vary, but the techniques used remain consistent. Students work from a variety of influences, from the old masters to contemporary artists. The second semester is similar in technique, but varies in scale. Projects involve sculptures of various materials, from clay to wire. Three-dimensional projects allow for more abstraction and consideration. Throughout the year, at the close of each project, students have their work critiqued. Students have to understand not only the mechanisms behind their artwork, but how to communicate ideas as well. Critiques allow for an outside perspective and help unify the group. No Prerequisites.

Portfolio

Full Year

This course is designed to help students create portfolio work for college, and will include both two- and three-dimensional work. Prerequisites: Studio Art. Grade Levels: 11, 12

PERFORMING ARTS COURSES

Chorus

Full Year

Upper School Chorus is for the student who truly enjoys singing and performing. The class focuses on basic sight-reading and ear-training skills, which are then incorporated into musical literature. The repertoire studied includes four- and five-part classical, pop, jazz, and gospel selections. The chorus performs several times during the year on campus at annual concerts and for the yearly Cabaret. The chorus is also active in the Naples community, performing at various churches, restaurants, and concert halls. The chorus will be taking an overseas tour in the spring of this year and hopefully will continue that tradition for many years to come. Grade Levels: 9-12

Select Chorus

Full Year

The Select High School Chorus is for the serious singer who has had at least one year of chorus experience. Advanced music reading is emphasized, with a focus on more demanding five- and six-part literature. The group performs several times during the year as its own ensemble and also joins with the Upper School Chorus for concerts. Prerequisites: Permission of the instructor. Grade Levels: 9-12

Instrumental Ensemble

Full Year

The Instrumental Ensemble class places rock, jazz, and classical musicians into ensembles appropriate to their level of experience and achievement. All aspects of performance will be emphasized and rehearsed, regardless of style, e.g.: intonation, phrasing and articulation, rhythm, expression, and rehearsal technique. The ensemble rehearses daily and, in the past, has performed at Harvest Hay Day, school sporting events, staged musicals, Graduation, and concerts throughout the year. Grade Levels: 9-12

AP Music Theory

Full Year

AP Music Theory is for the serious musician who wants to take musical training to a more advanced level. Four-part writing, polyrhythm, and score reading will be mastered. Instruction in test-taking skills and strategies for the AP exam will also be covered. Prerequisites: Beginning Music Theory or permission of the instructor. Grade Levels: 11, 12

What is Theatre? Introduction to Theatre Studies

In this course students endeavor to answer the question “What is theatre?” through an exploration of the many spheres that make live theatre possible, including acting, directing, set design, costume design, theatre history, and performance and directing theory. We will read widely from the points of view of actors, writers, directors, designers, and theorists. Students will have the opportunity to show their mastery of the material through hands-on projects performed both in and out of the classroom. Grade Levels: 9-12